Forests, Water and People

Drinking water supply and forest lands in Michigan

USDA Forest Service
Northeastern Area
State and Private Forestry

Project Description

In the Northeast and Midwest United States, forests are critically important to the supply of clean drinking water. Protecting and managing forests in source watersheds is an essential part of future strategies for providing clean safe drinking water that citizens can afford. The Forests, Water and People analysis identified private forests that are most important for drinking water supply and most in need of protection from development pressure. This fact sheet gives the results of the analysis for the State of Michigan. For more detailed description of methods, and results for the Northeast and Midwest United States, see the full report.

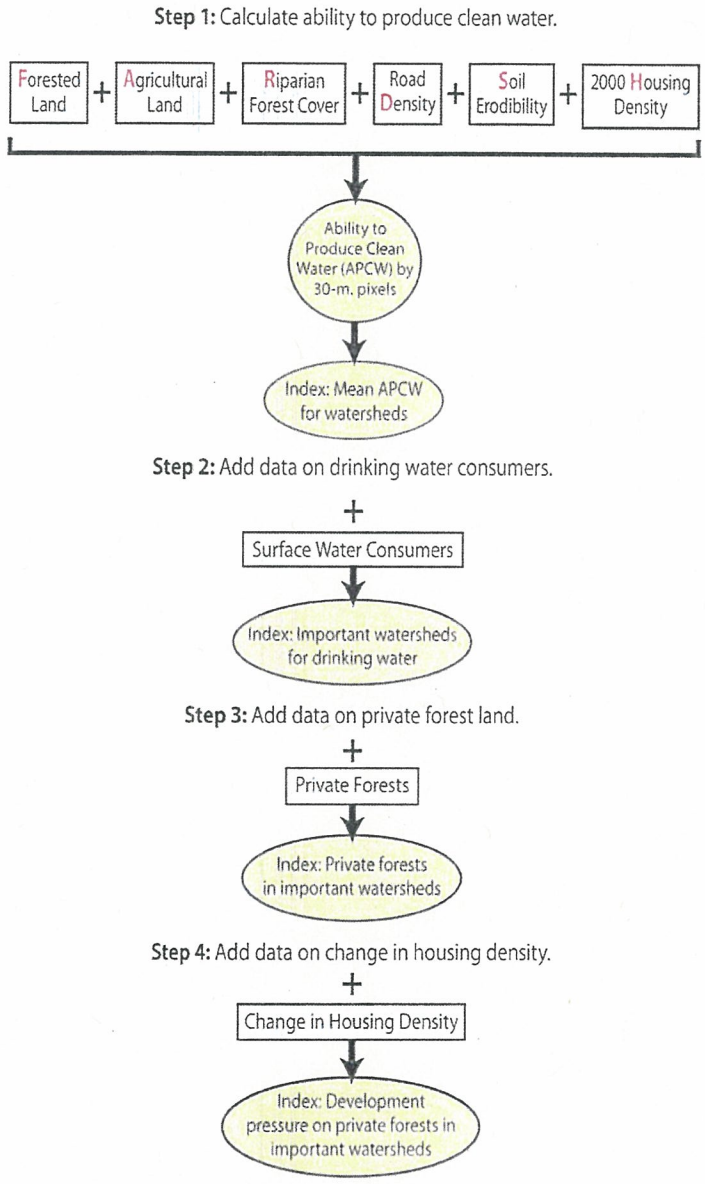
The Process

Through a 4 step GIS-based overlay analysis, four indices were developed for each watershed (see Figure 1).

Photo by Michael Land.

"Water, in all its uses and permutations, is by far the most valuable commodity that comes from the forest land that we manage, assist others to manage, and/or regulate."
Policy Statement, National Association of State Foresters

Figure 1. *Nine layers of GIS data (boxes) were combined in stepwise fashion, to produce four indices (ovals) of watershed importance for drinking water supplies and the need for private forest management to protect those supplies.*



Michigan Results

Highlights

- Michigan's Upper Peninsula watersheds scored above average in each step of the analysis, with the highest scores in step 1. The State contains large protected forest areas in the north and the Upper Peninsula, a large percent of privately owned forest (66 percent), and high development pressure.
- Those Michigan watersheds that ranked highest in their ability to produce clean water (step 1) are located in the Upper Peninsula, and in the northern part of the State. Sixteen watersheds in the Upper Peninsula (or one-quarter of all the State's watersheds) tied for the highest score in step 1.
- In the ability of watersheds to provide drinking water to the most people (step 2), several Michigan watersheds scored above average, particularly those in the Upper Peninsula. The scores were not as high as in other parts of the study area due to the fact that many areas of Michigan get their drinking water from ground water supplies, which are not included in this study. The Detroit, Flint, and Huron watersheds scored the highest.
- In the ability of watersheds to provide drinking water on private lands (step 3), all of the watersheds of the Upper Peninsula and many of the northern Michigan watersheds scored above average because the State has 66 percent privately owned forest land. The highest scoring watershed is the Michigamme, followed by a tie score between Thunder Bay, Brule, Cedar-Ford, and Tacoosh-Whitefish watersheds.
- Most of Michigan's watersheds scored above average in step 4, which ranked watersheds based on their development pressure and land ownership status (private lands ranked higher because they are subject to conversion). The two highest scoring watersheds were the Pine and Huron watersheds. These watersheds averaged in the top sixteen percent of the study area's watersheds.

Table 1. Watershed results for Michigan

Watershed Name	Hydrologic Unit Code	Mean APCW for watersheds	Surface drinking water consumers	% private forest in watershed	% watershed with housing density increase	Index: Development pressure on private forests important for drinking water supply Score (Step 4)	Rank (Step 4)
Pine	04080202	6 of 10	32,560	35 %	21 %	28 of 40	88 of 540
Huron	04090005	5 of 10	114,000	32 %	19 %	28 of 40	88 of 540
Cheboygan	04070004	9 of 10	0	49 %	21 %	27 of 40	109 of 540
Keweenaw Peninsula	04020103	10 of 10	0	84 %	5 %	27 of 40	109 of 540
Thunder Bay	04070006	9 of 10	0	64 %	12 %	27 of 40	109 of 540
Betsie-Platte	04060104	8 of 10	0	49 %	26 %	26 of 40	126 of 540
Boardman-Charlevoix	04060105	8 of 10	0	49 %	29 %	26 of 40	126 of 540
Flint	04080204	5 of 10	124,943	25 %	12 %	26 of 40	126 of 540
Manistee	04060103	9 of 10	0	40 %	19 %	26 of 40	126 of 540
Pere Marquette-White	04060101	8 of 10	0	44 %	20 %	26 of 40	126 of 540
Michigamme	04030107	10 of 10	0	74 %	3 %	25 of 40	148 of 540
Muskegon	04060102	7 of 10	0	44 %	23 %	25 of 40	148 of 540
Au Gres-Rifle	04080101	8 of 10	0	51 %	12 %	25 of 40	148 of 540
Tittabawassee	04080201	7 of 10	0	45 %	24 %	25 of 40	148 of 540
Dead-Kelsey	04020105	10 of 10	0	87 %	3 %	25 of 40	148 of 540
Upper Wisconsin	07070001	10 of 10	0	56 %	6 %	25 of 40	148 of 540
Detroit	04090004	4 of 10	975,810	20 %	9 %	25 of 40	148 of 540
Tacoosh-Whitefish	04030111	10 of 10	0	51 %	7 %	25 of 40	148 of 540
Cedar-Ford	04030109	10 of 10	0	59 %	4 %	24 of 40	169 of 540
Lone Lake-Ocqueoc	04070003	9 of 10	0	57 %	6 %	24 of 40	169 of 540
St. Joseph	04100003	2 of 10	250,000	15 %	17 %	23 of 40	199 of 540
Menominee	04030108	9 of 10	0	50 %	6 %	23 of 40	199 of 540
Black	04070005	9 of 10	0	37 %	10 %	23 of 40	199 of 540
Flambeau	07050002	10 of 10	0	45 %	4 %	23 of 40	199 of 540
Escanaba	04030110	10 of 10	0	49 %	3 %	23 of 40	199 of 540
Thornapple	04050007	6 of 10	0	27 %	30 %	22 of 40	229 of 540
Black-Presque Isle	04020101	10 of 10	0	56 %	2 %	22 of 40	229 of 540
Lower Grand	04050006	6 of 10	0	30 %	26 %	22 of 40	229 of 540

Watershed Name	Hydrologic Unit Code	Mean APCW for watersheds	Surface drinking water consumers	% private forest in watershed	% watershed with housing density increase	Index: Development pressure on private forests important for drinking water supply Score (Step 4)	Rank (Step 4)
Au Sable	04070007	9 of 10	0	32 %	9 %	22 of 40	229 of 540
Brule	04030106	10 of 10	0	52 %	2 %	22 of 40	229 of 540
Sturgeon	04020104	10 of 10	0	49 %	2 %	22 of 40	229 of 540
Fishdam-Sturgeon	04030112	10 of 10	0	36 %	3 %	22 of 40	229 of 540
Betsy-Chocolay	04020201	10 of 10	0	49 %	3 %	22 of 40	229 of 540
Kalamazoo	04050003	6 of 10	0	31 %	22 %	22 of 40	229 of 540
St. Marys	04070001	7 of 10	0	53 %	4 %	22 of 40	229 of 540
Brevoort-Millecoquins	04060107	10 of 10	0	44 %	2 %	22 of 40	229 of 540
Black-Macatawa	04050002	5 of 10	0	33 %	19 %	21 of 40	264 of 540
Lake St. Clair	04090002	1 of 10	11,848	23 %	13 %	21 of 40	264 of 540
Bad-Montreal	04010302	9 of 10	0	52 %	1 %	21 of 40	264 of 540
Carp-Pine	04070002	10 of 10	0	27 %	3 %	20 of 40	289 of 540
Raisin	04100002	3 of 10	26,504	16 %	17 %	20 of 40	289 of 540
Tahquamenon	04020202	10 of 10	0	39 %	1 %	19 of 40	320 of 540
Clinton	04090003	4 of 10	0	29 %	14 %	19 of 40	320 of 540
Manistique	04060106	10 of 10	3,874	26 %	2 %	19 of 40	320 of 540
St. Joseph	04050001	4 of 10	0	21 %	18 %	19 of 40	320 of 540
Upper Grand	04050004	5 of 10	0	25 %	15 %	19 of 40	320 of 540
Kawkawlin-Pine	04080102	5 of 10	0	28 %	12 %	19 of 40	320 of 540
St. Clair	04090001	4 of 10	4,652	22 %	16 %	19 of 40	320 of 540
Waiska	04020203	8 of 10	0	32 %	3 %	18 of 40	337 of 540
Ontonagan	04020102	10 of 10	0	34 %	1 %	18 of 40	337 of 540
Little Calumet-Galien	04040001	3 of 10	0	31 %	11 %	17 of 40	352 of 540
Shiawassee	04080203	4 of 10	0	22 %	10 %	17 of 40	352 of 540
Cass	04080205	5 of 10	0	25 %	9 %	17 of 40	352 of 540
Maple	04050005	4 of 10	0	14 %	17 %	17 of 40	352 of 540
Tiffin	04100006	1 of 10	22,144	12 %	9 %	16 of 40	380 of 540
Kankakee	07120001	3 of 10	43,789	10 %	7 %	16 of 40	380 of 540
Ottawa-Stony	04100001	1 of 10	995	16 %	13 %	15 of 40	394 of 540
Birch-Willow	04080104	2 of 10	0	16 %	5 %	12 of 40	442 of 540
Saginaw	04080206	2 of 10	0	6 %	7 %	12 of 40	442 of 540
Pigeon-Wiscoggin	04080103	2 of 10	0	8 %	4 %	10 of 40	465 of 540

Average or total value for all watersheds listed in Table 1

Mean APCW for watersheds:	6.9	of 10
Important watersheds for drinking water composite score:	8.8	of 20
Private forests in important watersheds composite score:	14.5	of 30
Development pressure on private forests in important watersheds composite score:	21.6	of 40
Forested Land (acres):	24,512,265.3	
Private Forest (acres):	16,175,379.7	
Private Forest Land under Development Pressure by 2030 (acres):	2,225,629.1	
(% private forest land):	13.8%	

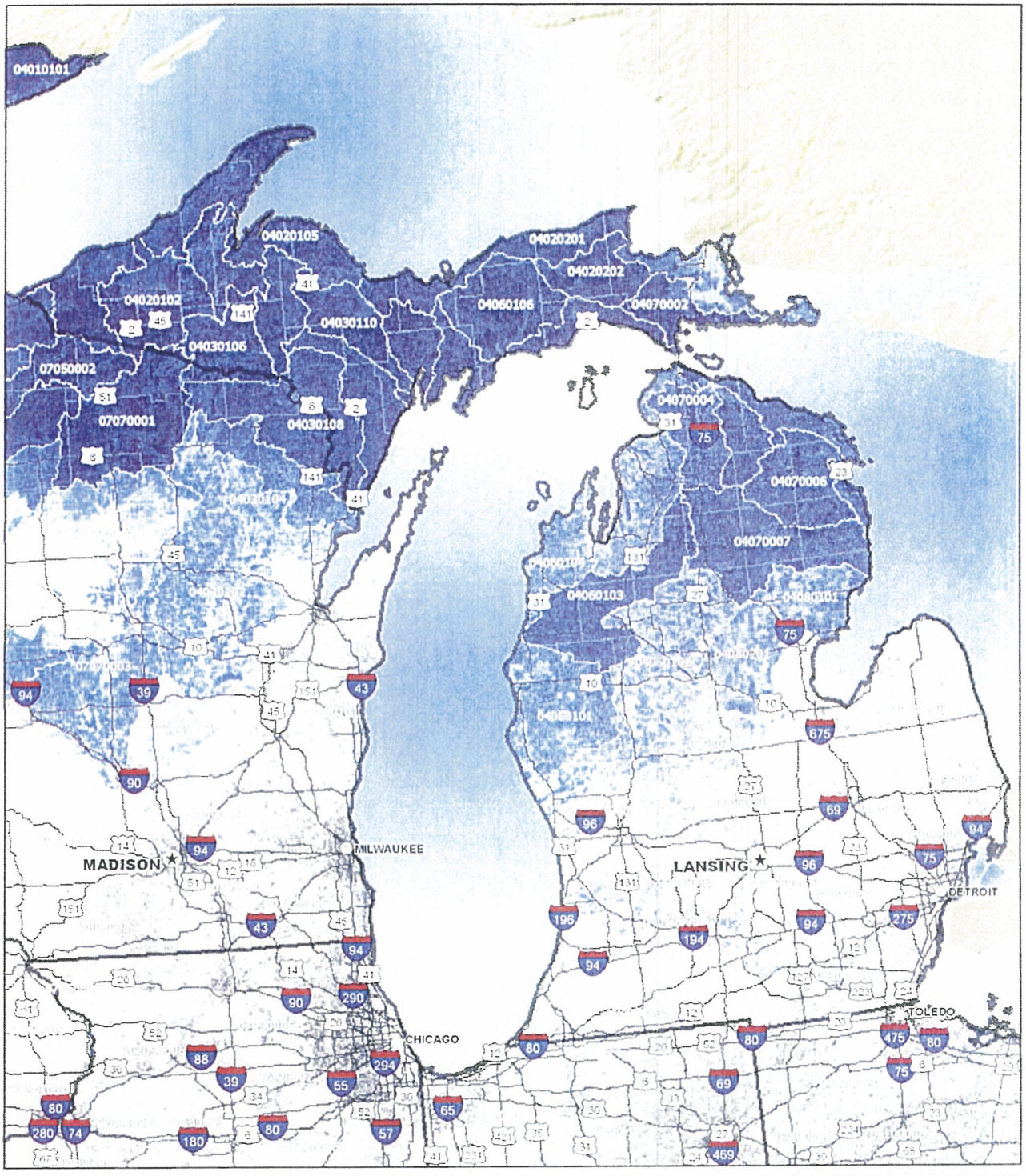
Note: If a watershed fell partially in Michigan, the whole watershed was considered for this project. State results reflect the total acreage for all watersheds that impact that State (this may account for a higher acreage figure than if only lands within State boundaries were considered).

Maps

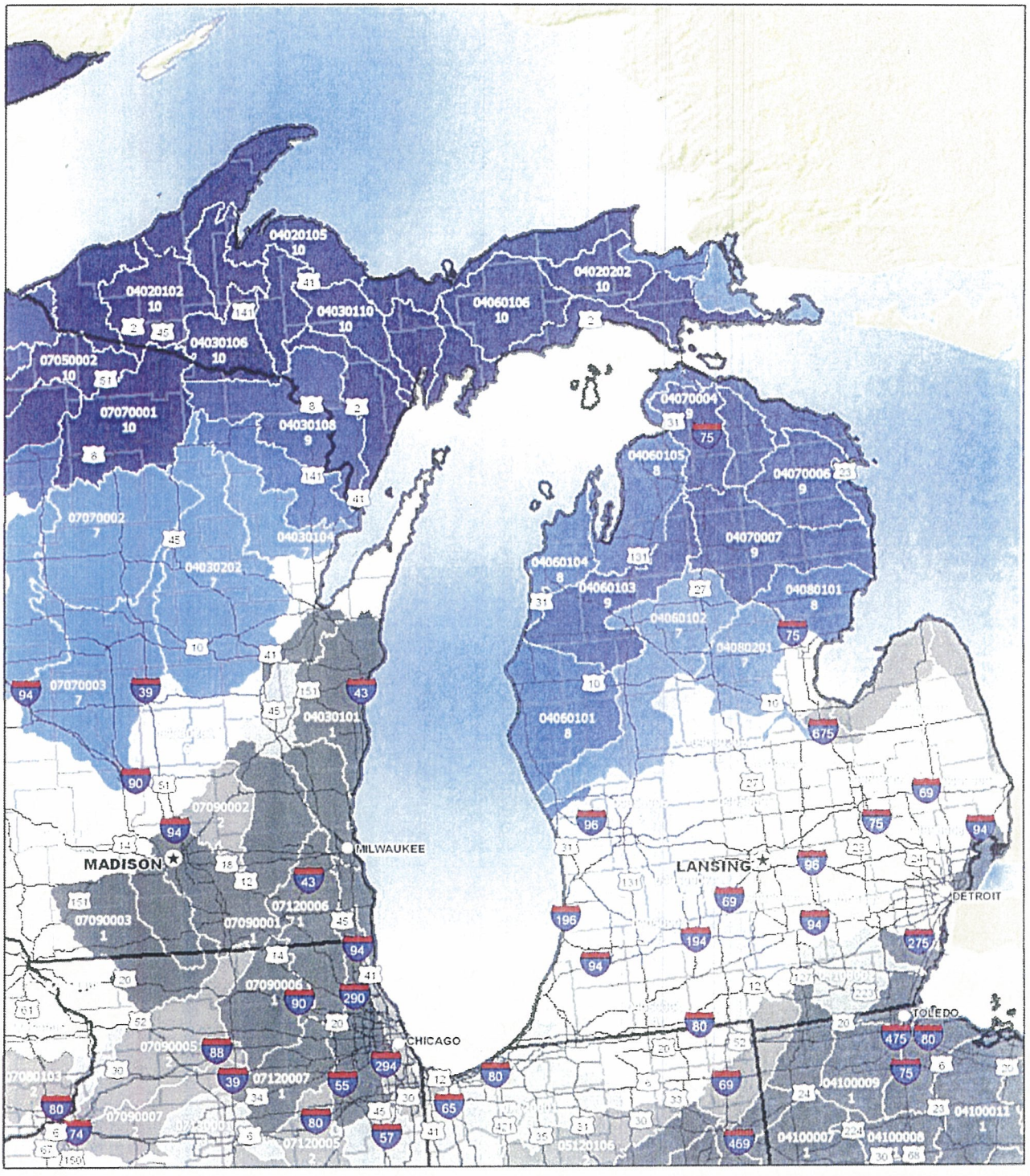
The following maps depict the results of each step in the Forests, Water and People analysis. Each watershed is labeled with the eight-digit HUC and the watershed composite score for the analysis step. (Note: the APCW, 30-m. pixel view does not have a watershed score)

All of the maps were produced by Rebecca Whitney Lilja, Office of Knowledge Management, Northeastern Area State and Private Forestry.

Ability to Produce Clean Water (APCW) (Step 1), 30-m View - Michigan



Mean Ability to Produce Clean Water (APCW) by Watershed (Step 1, Continued) - Michigan



STEP 1 COMPOSITE SCORE

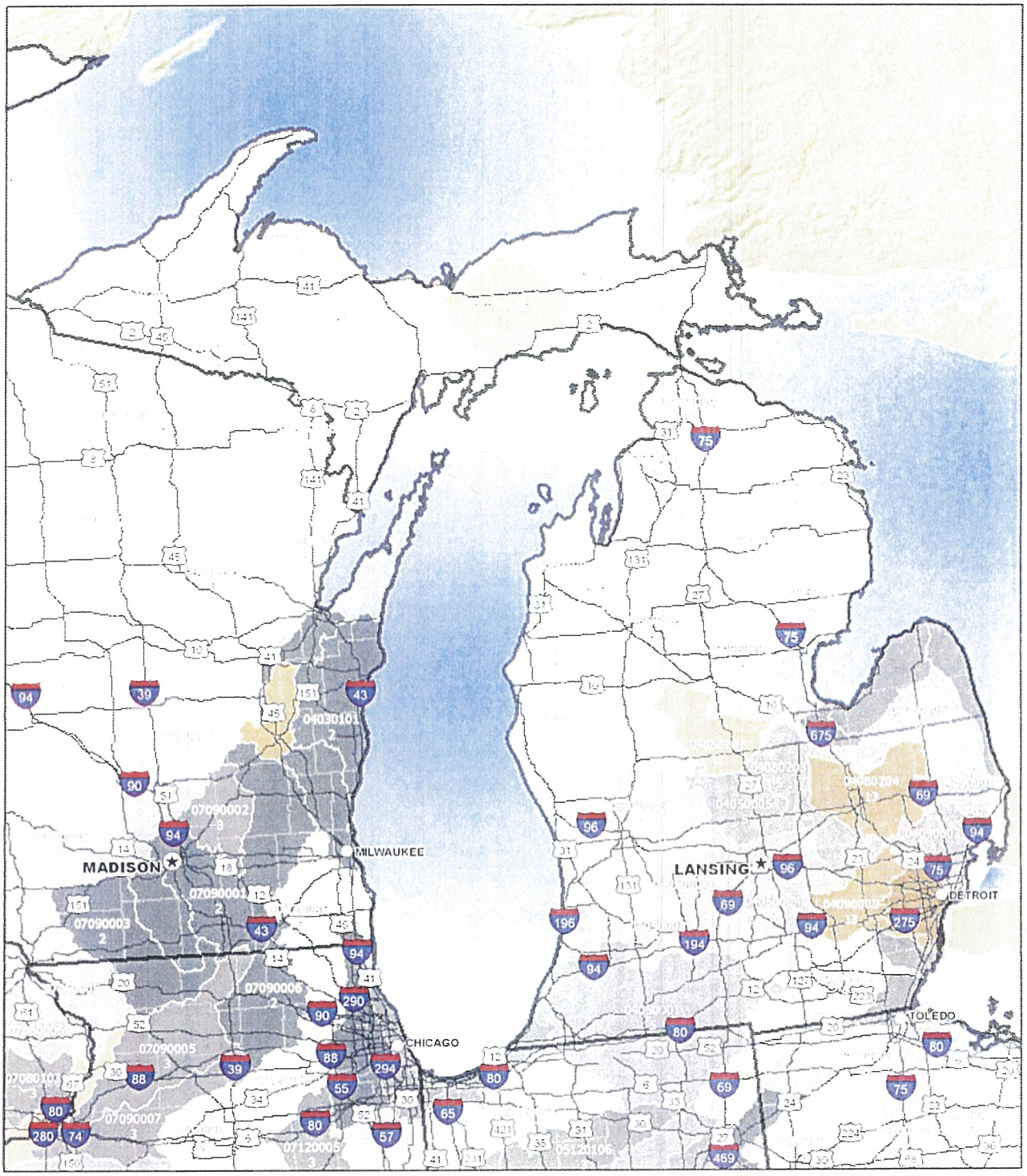
I (Low APCW) ... 10 (High APCW)

Projection: Albers

Watershed labels describe the 8-digit hydrologic unit code (HUC) and watershed composite score

0 15 30 60 Miles

Importance of watersheds for drinking water supply (Step 2) - Michigan



STEP 2 COMPOSITE SCORE

2 5 10 15 19

(Low APCW and Small number of water consumers)

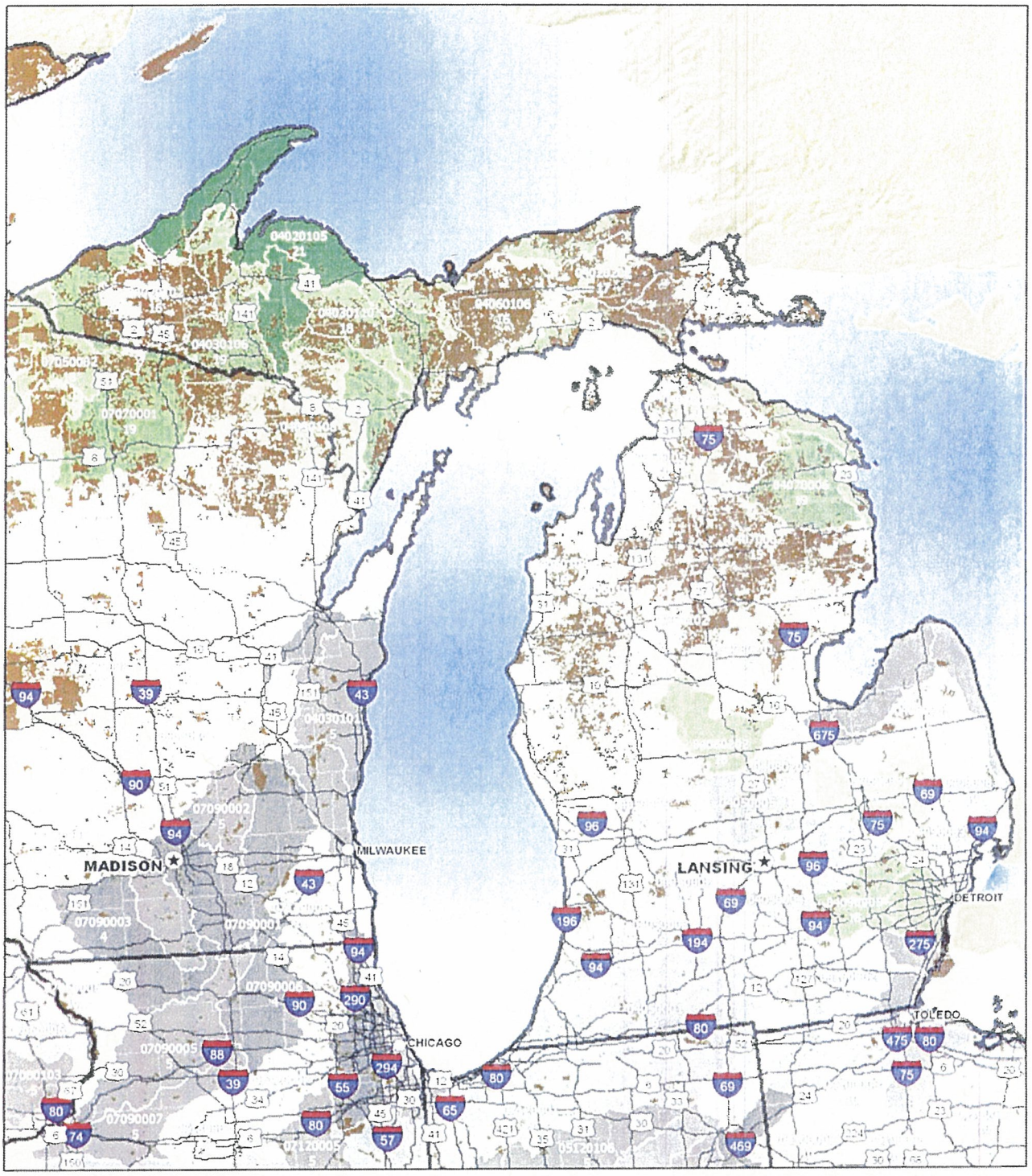
(High APCW and Large number of water consumers)

Projection: Albers

Watershed labels describe the 8-digit hydrologic unit code (HUC) and watershed composite score

0 15 30 60 Miles

Importance of watersheds and private forest for drinking water supply (Step 3) - Michigan



Development pressure on private forests in drinking water supply watersheds (Step 4) - Michigan

STEP 4 COMPOSITE SCORE

5 10 15 20 25 30 37

(Low APCW; Small number of water consumers; Low % private forest; and Low development pressure)

(High APCW; Large number of water consumers; High % private forest; and High development pressure)

Projection: Albers

Watershed labels describe the 8-digit hydrologic unit code (HUC) and watershed composite score

0 20 40 80 Miles

References

Table 2. Datasets used in the Forests, Water and People Analysis

Attribute	Dataset	Source*
Forest land	1992 National Landcover Dataset	U.S. Geological Survey 1999
Agricultural land by watershed	1992 National Landcover Dataset	U.S. Geological Survey 1999
Riparian forest cover by watershed	1:100,000-scale National Hydrography Dataset, buffered to 30 meters	Hatfield 2005
Road density	2002 Bureau of Transportation Statistics (BTS) Roads	U.S. Department of Transportation 2002
Soil erodibility	STATSGO Soil Dataset, kffact	Miller and White 1998
Housing density by watershed	Housing density in 2000	Theobald 2004
Surface drinking water consumers per unit area	Public Drinking Water System (PWS) Consumers by eight-digit HUC; City Drinking water consumers for New York City, Philadelphia, St. Louis, St. Paul, and Washington DC	U.S. Environmental Protection Agency 2005
Private forest by watershed	Protected Areas Database, Version 4; Wisconsin Stewardship Data	Conservation Biology Institute 2006; U.S. Geological Survey, Upper Midwest Environmental Sciences Center 2005
Development pressure per unit area	Housing density in 2000 and 2030	Theobald 2004

*Note: See the full report for complete reference citations.

Watershed Resources

Northeastern Area Watershed— http://www.na.fs.fed.us/watershed

Forest-to-Faucet Partnership—http://www.wetpartnership.org/index.html

Trust for Public Land Source Water Stewardship Project—http://www.tpl.org/

Forests on the Edge—http://www.fs.fed.us/openspace/fote/index.html

American Water Works Association—Professional and Technical Resources—
http://www.awwa.org/Resources/index.cfm?&navItemNumber=1416

Source Water Collaborative—http://www.protectdrinkingwater.org/

Environmental Protection Agency—Surf Your Watershed—http://cfpub.epa.gov/surf/locate/index.cfm

Environmental Protection Agency—Safe Drinking Water Information System—
http://www.epa.gov/enviro/html/sdwis/sdwis_ov.html

This project was a collaborative effort between the Northeastern Area and Dr. Paul K. Barten, Associate Professor, University of Massachusetts-Amherst and Co-director of the Forest-to-Faucet Partnership.

Kathryn Maloney, Director
11 Campus Blvd., Suite 200
Newtown Square, PA 19073
(610) 557-4103 (4177-FAX)
kmaloney@fs.fed.us

Albert H. Todd, Watershed Program Leader
(now Assistant Director
Ecosystem Services and Markets,
Washington, D.C.)
(202) 205-8528
atodd@fs.fed.us

Martina Barnes, Regional Planner
11 Campus Boulevard, Suite 200
Newtown Square, PA 19073
(610) 557-4217 (4136-FAX)
martinabarnes@fs.fed.us

www.na.fs.fed.us/watershed/

June 2009

http://iaspub.epa.gov/tmdl/w305b_report_v2.huc?p_huc=04020105&p_state=MI
Last updated on Thursday, December 01, 2011

National Assessment Database

Assessment Data for Michigan, Dead-Kelsey Watershed, Year 2002

Other Water Assessment Information

The most current report available for this watershed is 2006.
Data are also available for these years: 2004

Description of this table
For a report glossary please click here.

Click on the Water Name link to get 305(b) Lists/Assessment Unit Information Report

Table Legend:	Water Status is Good	Water Status is Threatened	Water Status is Impaired	Water Status has not been Assessed

Water Name	Assessment Unit ID	Location	Map	State	Water Type	Water Size	Unit	Water Status
BADGER CREEK	MI220602E	Dead River (tourist park impoundment) u/s.	No Mapping Data	MI	RIVER	3	MILES	GOOD
BIG GARLIC RIVER	MI220701B	u/s Lake Superior confluence (including Wilson Creek).	No Mapping Data	MI	RIVER	41	MILES	GOOD
BRICKYARD CREEK	MI220602D	Dead River confluence and u/s to Bishop Pond.	No Mapping Data	MI	RIVER	1.5	MILES	GOOD
CARP CREEK	MI220601C	Vicinity of Ishpeming WWTP; (T48N, R27W, Sec. 34 - NW1/4 of SW1/4)	No Mapping Data	MI	RIVER	.2	MILES	GOOD
CLARK CREEK	MI220602C	Dead River confluence u/s.	No Mapping Data	MI	RIVER	30	MILES	GOOD
CONNORS CREEK	MI220602H	Dead River confluence u/s.	No Mapping Data	MI	RIVER	7	MILES	GOOD
DEAD RIVER	MI220602K	About 20 miles NW of Marquette. Silver Lake Basin confluence	No Mapping Data	MI	RIVER	13	MILES	GOOD

		u/s.						
DEER LAKE (IMP. OF CARP RIVER)%	MI220601B	Located 13 miles west of Marquette in Ishpeming Twp. R27W, T48N, Sec. 27, 28 and 29.	No Mapping Data	MI	FRESHWATER LAKE	906	ACRES	IMPAIRED
FALLS RIVER	MI220805F	Lake Superior confluence u/s.	No Mapping Data	MI	RIVER	50	MILES	GOOD
GOLDMINE CREEK	MI220601J	Deer Lake confluence u/s near Ishpeming	No Mapping Data	MI	RIVER	3	MILES	GOOD
HARLOW CREEK	MI220602J	From Lake Superior confluence u/s to include Campeau Creek and Bismarck Creek.	No Mapping Data	MI	RIVER	40	MILES	GOOD
HURON RIVER	MI220703C	From T52N, R30W, Sec. 26 (Big Erics Bridge) to mouth T52N, R29W, Sec. 18.	No Mapping Data	MI	RIVER	6.1	MILES	GOOD
KELSEY CREEK	MI220805J	Lake Superior confluence u/s.	No Mapping Data	MI	RIVER	6.5	MILES	GOOD
LINDEN CREEK	MI220805D	Lake Superior confluence u/s.	No Mapping Data	MI	RIVER	9	MILES	GOOD
LITTLE CARP RIVER	MI220805I	Lake Superior confluence u/s.	No Mapping Data	MI	RIVER	8.5	MILES	GOOD
LITTLE DEAD RIVER	MI220602I	Dead River storage basin confluence u/s (including Zhalkie Creek).	No Mapping Data	MI	RIVER	5	MILES	GOOD
LITTLE GARLIC RIVER	MI220701A	From Lake Superior u/s (watershed).	No Mapping Data	MI	RIVER	23	MILES	GOOD
MENGE CREEK	MI220805G	Lake Superior confluence u/s.	No Mapping Data	MI	RIVER	5	MILES	GOOD
MIDWAY CREEK	MI220602F	Dead River confluence u/s.	No Mapping Data	MI	RIVER	3	MILES	GOOD
MULLIGAN CREEK	MI220602G	Dead River confluence u/s.	No Mapping Data	MI	RIVER	23	MILES	GOOD

PINE RIVER	MI220703A	At Huron Mountain Club. Lake Superior confluence u/s to Pine Lake.	No Mapping Data	MI	RIVER	2	MILES	GOOD
RAVINE RIVER	MI220703F	Lake Superior confluence u/s.	No Mapping Data	MI	RIVER	26	MILES	GOOD
REANY CREEK	MI220602B`	Dead River confluence u/s.	No Mapping Data	MI	RIVER	12	MILES	GOOD
SALMON-TROUT RIVER	MI220703E	Huron Mountain Club - Lake Superior confluence u/s including the E. Branch Salmon-Trout and Snake Creek (watershed).	No Mapping Data	MI	RIVER	33	MILES	GOOD
SILVER RIVER	MI220704A	From Gomanche Creek to mouth.	No Mapping Data	MI	RIVER	6.5	MILES	GOOD
SIX-MILE CREEK	MI220805H	Lake Superior confluence u/s.	No Mapping Data	MI	RIVER	10	MILES	GOOD
SLATE RIVER	MI220703B	From headwaters T50N, R31W, Sec. 11 to mouth T51N, R31W, Sec. 8.	No Mapping Data	MI	RIVER	11.8	MILES	GOOD
WHETSTONE CREEK	MI220601D	Vicinity of Marquette.	No Mapping Data	MI	RIVER	1.7	MILES	GOOD
YELLOW DOG RIVER	MI220702A	Independence Lake u/s (watershed).	No Mapping Data	MI	RIVER	73	MILES	GOOD

State Causes of Impairment

Michigan, Dead-Kelsey Watershed

Description of this table

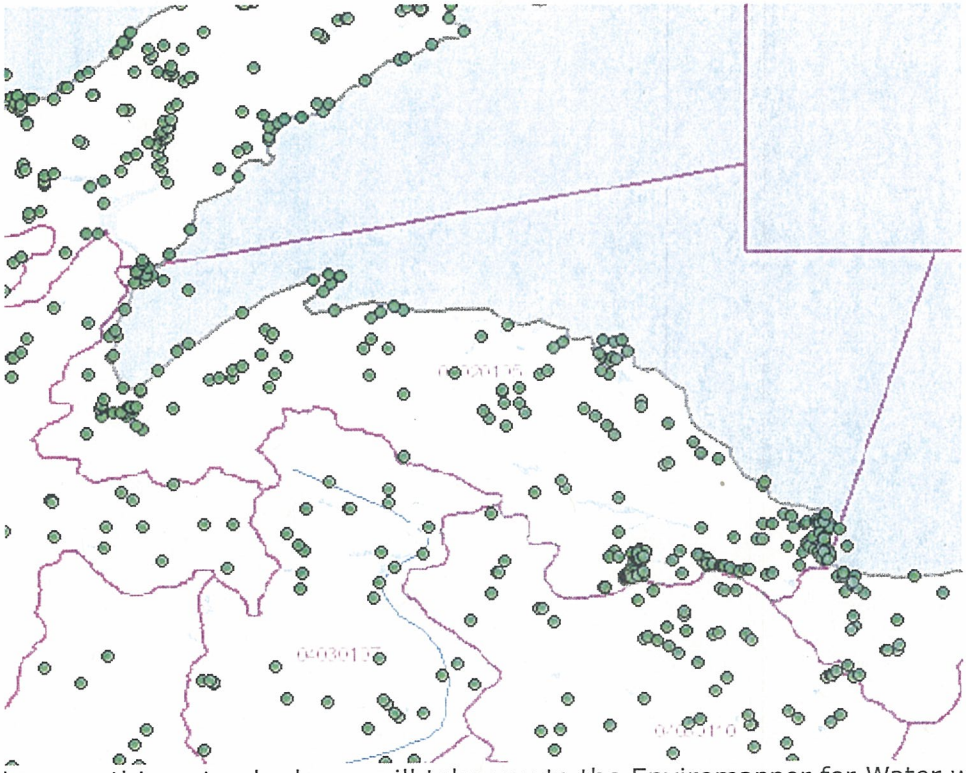
State Cause Name	Size of Assessed Waters with Listed Causes of Impairment							
	Rivers, Streams, Creeks (Miles)	Lakes, Ponds, Reservoir (Acres)	Bays, Estuaries (Square Miles)	Coastal Shorelines (Miles)	Oceans, Near Coastal Waters (Square Miles)	Wetlands (Acres)	Great Lakes Shoreline (Miles)	Great Lakes Open Waters (Squar Miles)
MERCURY	.00	906.00	.00	.00	.00	.00	.00	.00
OTHER METALS	.20	.00	.00	.00	.00	.00	.00	.00

Probable Sources Contributing to Impairment

Michigan, Dead-Kelsey Watershed

Description of this table

State Source Name	Size of Assessed Waters with Probable Sources of Impairment							
	Rivers, Streams, Creeks (Miles)	Lakes, Ponds, Reservoir (Acres)	Bays, Estuaries (Square Miles)	Coastal Shorelines (Miles)	Oceans, Near Coastal Waters (Square Miles)	Wetlands (Acres)	Great Lakes Shoreline (Miles)	Great Lakes Open Waters (Square Miles)
CONTAMINATED SEDIMENTS	.00	906.00	.00	.00	.00	.00	.00	.00
MUNICIPAL POINT SOURCE DISCHARGES	.20	.00	.00	.00	.00	.00	.00	.00



Clicking anywhere on this watershed map will take you to the Enviromapper for Water website, where you can view and map various types of environmental information for the watershed. This information includes Superfund sites, water discharge permits, toxic releases, and more.

National Assessment Database

Assessment Data for Michigan, Dead-Kelsey Watershed (8 Digit USGS Cataloging Unit), Year 2004

Description of this table
For a report glossary please click here.

Click on the Water Name link to get 305(b) Lists/Assessment Unit Information Report

Table Legend:	Water Status is Good	Water Status is Threatened	Water Status is Impaired	Water Status has not been Assessed

Water Name	Assessment Unit ID	Location	Map	State	Water Type	Water Size	Unit	Water Status
BADGER CREEK	MI220602E	Dead River (tourist park impoundment) u/s.	No Mapping Data	MI	RIVER	3	MILES	GOOD
BIG GARLIC RIVER	MI220701B	u/s Lake Superior confluence (including Wilson Creek).	No Mapping Data	MI	RIVER	41	MILES	GOOD
BRICKYARD CREEK	MI220602D	Dead River confluence and u/s to Bishop Pond.	No Mapping Data	MI	RIVER	1.5	MILES	GOOD
CARP CREEK TO DEER LAKE TO CARP RIVER MOUTH#	MI220601A	Vicinity of Ishpeming.	No Mapping Data	MI	RIVER	29	MILES	IMPAIRED
CLARK CREEK	MI220602C	Dead River confluence u/s.	No Mapping Data	MI	RIVER	30	MILES	GOOD
CONNORS CREEK	MI220602H	Dead River confluence u/s.	No Mapping Data	MI	RIVER	7	MILES	GOOD
DEAD RIVER	MI220602K	About 20 miles NW of Marquette. Silver Lake Basin confluence u/s.	No Mapping Data	MI	RIVER	13	MILES	GOOD
DEAD RIVER	MI220602X	d/s from Forestville and Tourist Park Dams, approximately 4 miles.	No Mapping Data	MI	RIVER	1.5	MILES	NOT ASSESSED
FALLS RIVER	MI220805F	Lake Superior L'Anse Bay confluence u/s.	No Mapping Data	MI	RIVER	50	MILES	GOOD
FORESTVILLE BASIN (DEAD RIVER)	MI220602A	From the Tourist Park Dam u/s to the powerhouse at the west end of the Forestville Reservoir.	No Mapping Data	MI	FRESHWATER LAKE	85	ACRES	IMPAIRED
GOLDMINE CREEK	MI220601J	Deer Lake confluence u/s near Ishpeming	No Mapping Data	MI	RIVER	3	MILES	GOOD

National Assessment Database

About this Database

Assessing Water Quality (Questions and Answers)

The 2004 National Assessment Database (Fact Sheet)

Previous National Water Quality Reports

HARLOW CREEK	MI220602J	From Lake Superior confluence u/s to include Campeau Creek and Bismarck Creek.	No Mapping Data	MI	RIVER	40	MILES	GOOD
HURON RIVER	MI220703C	Lake Superior Huron Bay u/s to Big Erics Bridge.	No Mapping Data	MI	RIVER	6.1	MILES	GOOD
KELSEY CREEK	MI220805J	Lake Superior L'Anse Bay confluence u/s.	No Mapping Data	MI	RIVER	6.5	MILES	GOOD
LAKE INDEPENDENCE	MI220702X	Vicinity of Big Bay.	No Mapping Data	MI	FRESHWATER LAKE	1860	ACRES	IMPAIRED
LINDEN CREEK	MI220805D	Lake Superior confluence u/s.	No Mapping Data	MI	RIVER	9	MILES	GOOD
LITTLE CARP RIVER	MI220805I	Lake Superior L'Anse Bay confluence u/s.	No Mapping Data	MI	RIVER	8.5	MILES	GOOD
LITTLE DEAD RIVER	MI220602I	Dead River storage basin confluence u/s (including Zhalkie Creek).	No Mapping Data	MI	RIVER	5	MILES	GOOD
LITTLE GARLIC RIVER	MI220701A	From Lake Superior u/s (watershed).	No Mapping Data	MI	RIVER	23	MILES	GOOD
MCCLURE STORAGE RESERVOIR	MI220602Y	HUC: 0WBLOCN	No Mapping Data	MI	FRESHWATER LAKE	132	ACRES	NOT ASSESSED
MENGE CREEK	MI220805G	Lake Superior L"Anse Bay confluence u/s.	No Mapping Data	MI	RIVER	5	MILES	GOOD
MIDWAY CREEK	MI220602F	Dead River confluence u/s.	No Mapping Data	MI	RIVER	3	MILES	GOOD
MULLIGAN CREEK	MI220602G	Dead River confluence u/s.	No Mapping Data	MI	RIVER	23	MILES	GOOD
ORIANNA BROOK	MI220601I	Division St. u/s to the confluence of Westren Brook.	No Mapping Data	MI	RIVER	1	MILES	GOOD
PINE RIVER	MI220703A	At Huron Mountain Club. Lake Superior confluence u/s to Pine Lake.	No Mapping Data	MI	RIVER	2	MILES	GOOD
RAVINE RIVER	MI220703F	Lake Superior Huron Bay confluence u/s.	No Mapping Data	MI	RIVER	26	MILES	GOOD
REANY CREEK	MI220602B	Dead River confluence u/s.	No Mapping Data	MI	RIVER	12	MILES	GOOD
SALMON-TROUT RIVER	MI220703E	Huron Mountain Club - Lake Superior confluence u/s including the E. Branch Salmon-Trout and Snake Creek (watershed).	No Mapping Data	MI	RIVER	33	MILES	GOOD

SILVER RIVER	MI220704A	Lake Superior Huron Bay u/s to Gomanche Creek confluence.	No Mapping Data	MI	RIVER	6.5	MILES	GOOD
SIX-MILE CREEK	MI220805H	Lake Superior L'Anse Bay confluence u/s.	No Mapping Data	MI	RIVER	10	MILES	GOOD
SLATE RIVER	MI220703B	Lake Superior Huron Bay confluence u/s.	No Mapping Data	MI	RIVER	14	MILES	GOOD
UNNAMED TRIBUTARY TO CARP RIVER, NEAR NEGAUNEE	MI220601E	At RR bridge u/s of the Negaunee WWTP effluent ditch.	No Mapping Data	MI	RIVER	.5	MILES	GOOD
WHETSTONE CREEK	MI220601D	Vicinity of Marquette.	No Mapping Data	MI	RIVER	1.7	MILES	GOOD
YELLOW DOG RIVER	MI220702A	Independence Lake u/s (watershed).	No Mapping Data	MI	RIVER	73	MILES	GOOD

State Causes of Impairment

Michigan, Dead-Kelsey Watershed

Description of this table

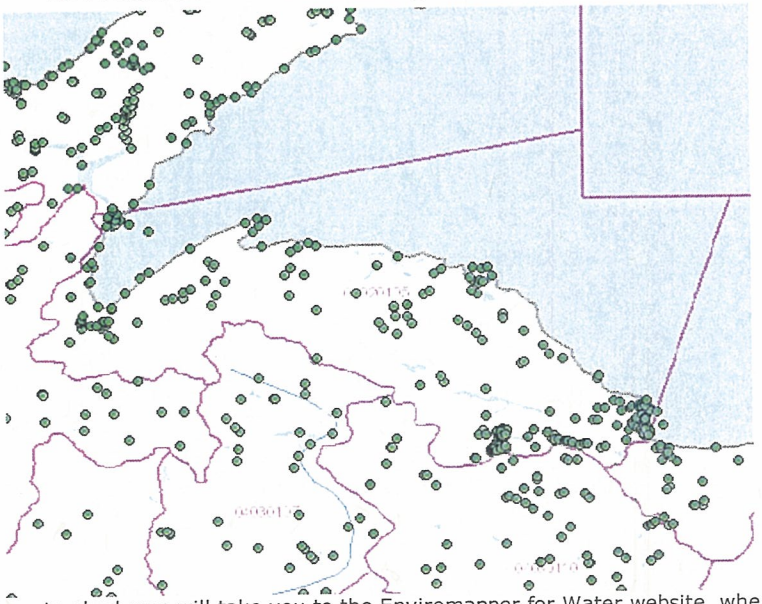
State Cause Name	Size of Assessed Waters with Listed Causes of Impairment								
	Rivers, Streams, Creeks (Miles)	Lakes, Ponds, Reservoir (Acres)	Bays, Estuaries (Square Miles)	Coastal Shorelines (Miles)	Oceans, Near Coastal Waters (Square Miles)	Wetlands (Acres)	Great Lakes Shoreline (Miles)	Great Lakes Open Waters (Square Miles)	Inland Lake Shoreline (Miles)
MERCURY	29.00	.00	.00	.00	.00	.00	.00	.00	.00
MERCURY IN FISH TISSUE	29.00	1,945.00	.00	.00	.00	.00	.00	.00	.00

Probable Sources Contributing to Impairment

Michigan, Dead-Kelsey Watershed

Description of this table

No Probable Sources Contributing to Impairment reported.



Clicking anywhere on this watershed map will take you to the Enviromapper for Water website, where you can view and map various types of environmental information for the watershed. This information includes Superfund sites, water discharge permits,

toxic releases, and more.

http://iaspub.epa.gov/tmdl/w305b_report_v6.huc?p_huc=04020105&p_state=MI&p_cycle=2006
Last updated on Thursday, December 01, 2011

National Assessment Database

Assessment Data for Michigan, Dead-Kelsey Watershed (8 Digit USGS Cataloging Unit), Year 2006

National Assessment Database

- **About this Database**
- **Assessing Water Quality** (Questions and Answers)
- **The 2004 National Assessment Database** (Fact Sheet)
- **Previous National Water Quality Reports**

Description of this table

For a report glossary please click here.

Click on the Water Name link to get 305(b) Lists/Assessment Unit Information Report

Table Legend:	Water Status is Good	Water Status is Threatened	Water Status is Impaired	Water Status has not been Assessed

Water Name	Assessment Unit ID	Location	Map	State	Water Type	Water Size	Unit	Water Status
BADGER CREEK	MI220602E	Dead River (tourist park impoundment) u/s.	No Mapping Data	MI	RIVER	3	MILES	GOOD
BIG GARLIC RIVER	MI220701B	u/s Lake Superior confluence (including Wilson Creek).	No Mapping Data	MI	RIVER	41	MILES	GOOD
BIG PUP CREEK	MI220702B	Little Pup Creek confluence upstream.	No Mapping Data	MI	RIVER	11	MILES	GOOD
BIG PUP CREEK	MI220702D	Little Pup Creek confluence upstream.	No Mapping Data	MI	RIVER	11	MILES	GOOD
BRICKYARD CREEK	MI220602D	Dead River confluence and u/s to Bishop Pond.	No Mapping Data	MI	RIVER	1.5	MILES	GOOD
CARP CREEK	MI220601K	Vicinity of Ishpeming. Deer Lake confluence upstream to just upstream of Stoneville Road.	No Mapping Data	MI	RIVER	5	MILES	IMPAIRED
CARP CREEK TO DEER LAKE TO CARP RIVER MOUTH	MI220601A	Vicinity of Ishpeming.	No Mapping Data	MI	RIVER	29	MILES	IMPAIRED
CEDAR CREEK	MI220703D	Cliff River confluence upstream: vicnity of Northwestern Road.	No Mapping Data	MI	RIVER	8	MILES	GOOD
CEDAR CREEK	MI220703H	Cliff River confluence upstream: vicnity of Northwestern Road.	No Mapping Data	MI	RIVER	8	MILES	GOOD
CLARK CREEK	MI220602C	Dead River confluence u/s.	No Mapping Data	MI	RIVER	30	MILES	GOOD
CONNORS CREEK	MI220602H	Dead River confluence u/s.	No Mapping Data	MI	RIVER	7	MILES	GOOD
DEAD RIVER	MI220602X	d/s from Forestville and Tourist Park Dams, approximately 4 miles.	No Mapping Data	MI	RIVER	1.5	MILES	GOOD
DEAD RIVER	MI220602K	About 20 miles NW of Marquette. Silver Lake Basin confluence u/s.	No Mapping Data	MI	RIVER	13	MILES	GOOD
DEAD RIVER STORAGE BASIN	MI220602L	Impoundment of the Dead River u/s from McClure Storage Basin, Negaunee.	No Mapping Data	MI	RESERVOIR	2704	ACRES	GOOD
DEER LAKE	MI220601B	Located 13 miles west of Marquette in Ishpeming Twp.	No Mapping Data	MI	RESERVOIR	906	ACRES	IMPAIRED
FALLS RIVER	MI220805F	Lake Superior L'Anse Bay confluence u/s.	No Mapping Data	MI	RIVER	50	MILES	GOOD

FORESTVILLE BASIN	MI220602A	From the Tourist Park Dam u/s to the powerhouse at the west end of the Forestville Reservoir.	No Mapping Data	MI	RESERVOIR	85	ACRES	IMPAIRED
GOLDMINE CREEK	MI220601J	Deer Lake confluence u/s near Ishpeming	No Mapping Data	MI	RIVER	3	MILES	GOOD
HARLOW CREEK	MI220602J	From Lake Superior confluence u/s to include Campeau Creek and Bismarck Creek.	No Mapping Data	MI	RIVER	40	MILES	GOOD
HURON RIVER	MI220703C	Lake Superior Huron Bay u/s to Big Erics Bridge.	No Mapping Data	MI	RIVER	6	MILES	GOOD
KELSEY CREEK	MI220805J	Lake Superior L'Anse Bay confluence u/s.	No Mapping Data	MI	RIVER	6.5	MILES	GOOD
LAKE INDEPENDENCE	MI220702X	Vicinity of Big Bay.	No Mapping Data	MI	FRESHWATER LAKE	1860	ACRES	IMPAIRED
LAKE SUPERIOR L'ANSE WATERFRONT PARK BEACH	MI220805B	Keweenaw Bay / Lake Superior, At the intersection of Broad and Front Streets in L'Anse	No Mapping Data	MI	GREAT LAKES SHORELINE	.1	MILES	GOOD
LINDEN CREEK	MI220805D	Lake Superior confluence u/s.	No Mapping Data	MI	RIVER	9	MILES	GOOD
LITTLE CARP RIVER	MI220805I	Lake Superior L'Anse Bay confluence u/s.	No Mapping Data	MI	RIVER	8.5	MILES	GOOD
LITTLE DEAD RIVER	MI220602I	Dead River storage basin confluence u/s (including Zhalkie Creek).	No Mapping Data	MI	RIVER	5	MILES	GOOD
LITTLE GARLIC RIVER	MI220701A	From Lake Superior u/s (watershed).	No Mapping Data	MI	RIVER	23	MILES	GOOD
MCCLURE STORAGE RESERVOIR	MI220602Y	Impoundment of the Dead River west of Marquette u/s of Carrie Road.	No Mapping Data	MI	RESERVOIR	132	ACRES	GOOD
MENGE CREEK	MI220805G	Lake Superior L"Anse Bay confluence u/s.	No Mapping Data	MI	RIVER	5	MILES	GOOD
MIDWAY CREEK	MI220602F	Dead River confluence u/s.	No Mapping Data	MI	RIVER	3	MILES	GOOD
MULLIGAN CREEK	MI220602G	Dead River confluence u/s.	No Mapping Data	MI	RIVER	23	MILES	GOOD
ORIANNA BROOK	MI220601I	Division Street upstream to the confluence of Western Brook.	No Mapping Data	MI	RIVER	1	MILES	GOOD
PINE RIVER	MI220703A	At Huron Mountain Club. Lake Superior confluence u/s to Pine Lake.	No Mapping Data	MI	RIVER	2	MILES	GOOD
RAVINE RIVER	MI220703F	Lake Superior Huron Bay confluence u/s.	No Mapping Data	MI	RIVER	26	MILES	GOOD
REANY CREEK	MI220602B	Dead River confluence u/s.	No Mapping Data	MI	RIVER	12	MILES	GOOD
SALMON TROUT RIVER	MI220703G	Northwestern Road upstream to to Triple A Road.	No Mapping Data	MI	RIVER	4	MILES	IMPAIRED
SALMON TROUT RIVER	MI220703E	Lake Superior upstream to Northwestern Road.	No Mapping Data	MI	RIVER	57	MILES	GOOD
SILVER RIVER	MI220704A	Lake Superior Huron Bay u/s to Gomanche Creek confluence.	No Mapping Data	MI	RIVER	6.5	MILES	GOOD
SIX-MILE CREEK	MI220805H	Lake Superior L'Anse Bay confluence u/s.	No Mapping Data	MI	RIVER	10	MILES	GOOD

SLATE RIVER	MI220703B	Lake Superior Huron Bay confluence u/s.	No Mapping Data	MI	RIVER	14	MILES	GOOD
UNNAMED TRIBUTARY TO CARP RIVER, NEAR NEGAUNEE	MI220601E	At RR bridge u/s of the Negaunee WWTP effluent ditch.	No Mapping Data	MI	RIVER	.5	MILES	GOOD
WHETSTONE CREEK	MI220601D	Vicinity of Marquette.	No Mapping Data	MI	RIVER	1.7	MILES	GOOD
YELLOW DOG RIVER	MI220702C	Marquette County Road 510 upstream to access road off Triple A Road (0.3 miles west of Champion and Michigamme township line; in the Escanaba River State Forest).	No Mapping Data	MI	RIVER	11	MILES	IMPAIRED
YELLOW DOG RIVER	MI220702A	Upstream from Independence Lake	No Mapping Data	MI	RIVER	73	MILES	GOOD

State Causes of Impairment

Michigan, Dead-Kelsey Watershed

Description of this table

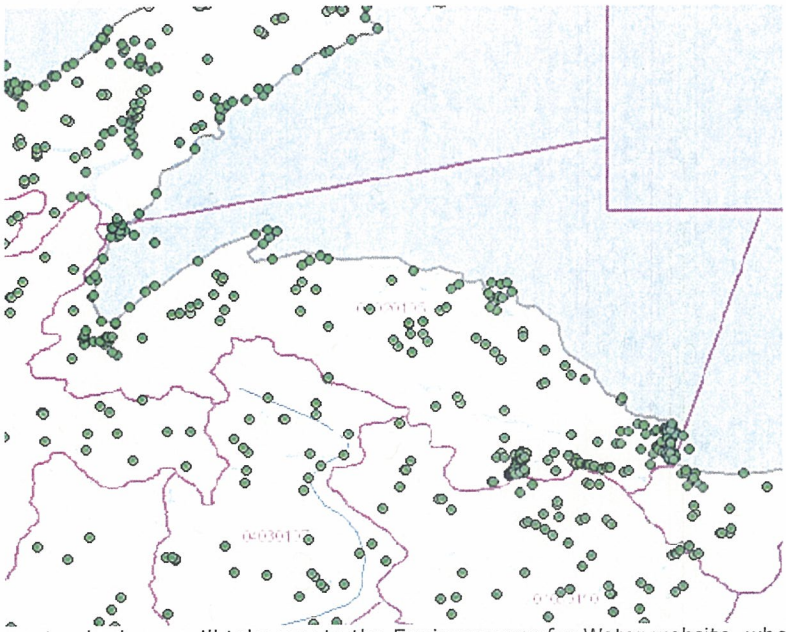
State Cause Name	Size of Assessed Waters with Listed Causes of Impairment									
	Rivers, Streams, Creeks (Miles)	Lakes, Ponds, Reservoir (Acres)	Bays, Estuaries (Square Miles)	Coastal Shorelines (Miles)	Oceans, Near Coastal Waters (Square Miles)	Wetlands (Acres)	Great Lakes Shoreline (Miles)	Great Lakes Open Waters (Square Miles)	Inland Lake Shoreline (Miles)	Great Lakes Connecting Channel (Miles)
MERCURY IN FISH TISSUE	87.00	8,553.00	.00	.00	.00	.00	.00	.00	.00	.00
MERCURY IN WATER COLUMN	60.00	.00	.00	.00	.00	.00	.00	.00	.00	.00

Probable Sources Contributing to Impairment

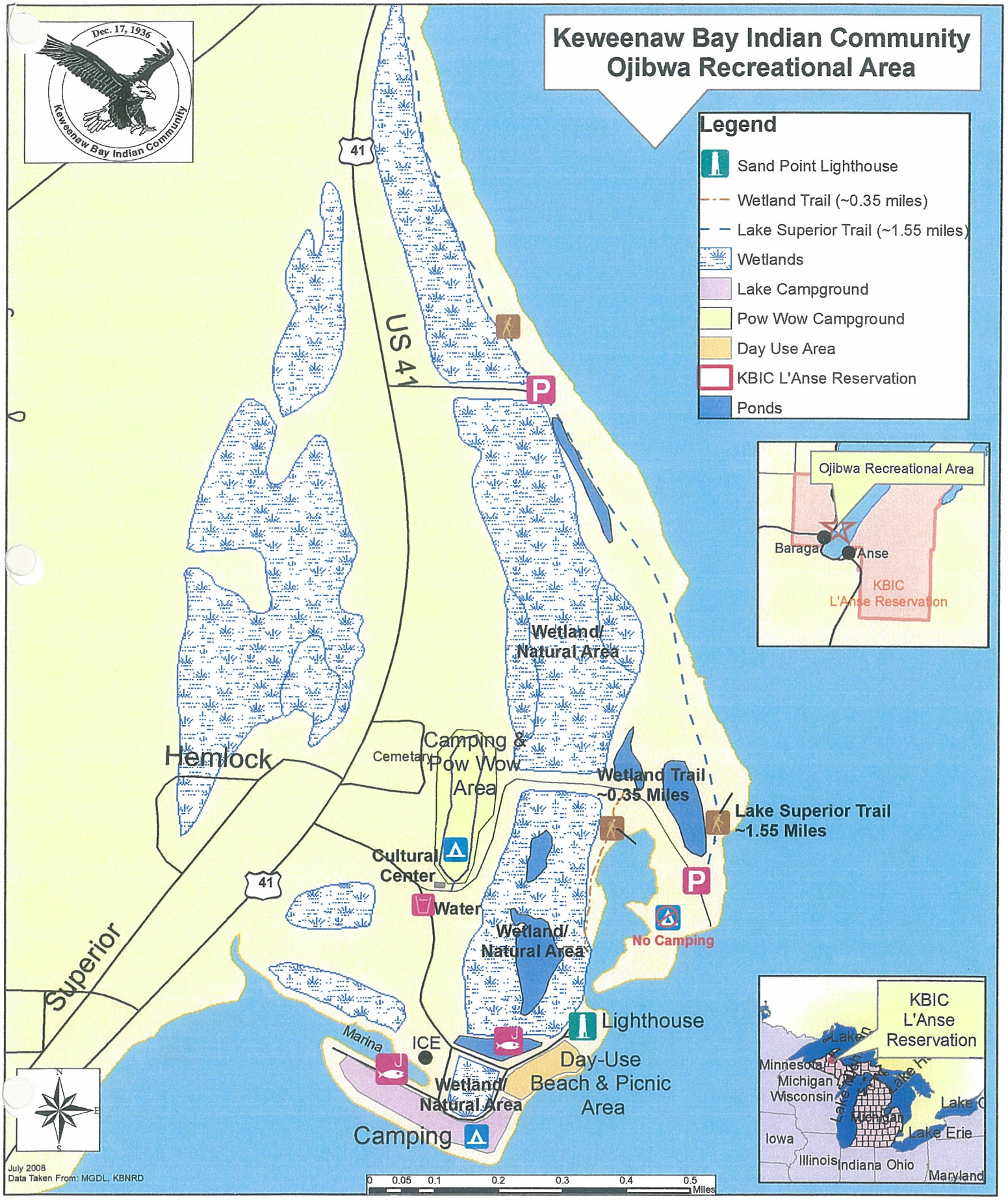
Michigan, Dead-Kelsey Watershed

Description of this table

State Source Name	Size of Assessed Waters with Probable Sources of Impairment									
	Rivers, Streams, Creeks (Miles)	Lakes, Ponds, Reservoir (Acres)	Bays, Estuaries (Square Miles)	Coastal Shorelines (Miles)	Oceans, Near Coastal Waters (Square Miles)	Wetlands (Acres)	Great Lakes Shoreline (Miles)	Great Lakes Open Waters (Square Miles)	Inland Lake Shoreline (Miles)	Great Lakes Connecting Channel (Miles)
CONTAMINATED SEDIMENTS	29.00	906.00	.00	.00	.00	.00	.00	.00	.00	.00
ATMOSPHERIC DEPOSITION - TOXICS	20.00	1,945.00	.00	.00	.00	.00	.00	.00	.00	.00
SUBSURFACE (HARDROCK) MININING	5.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
MUNICIPAL POINT SOURCE DISCHARGES	29.00	.00	.00	.00	.00	.00	.00	.00	.00	.00



Clicking anywhere on this watershed map will take you to the Enviromapper for Water website, where you can view and map various types of environmental information for the watershed. This information includes Superfund sites, water discharge permits, toxic releases, and more.


Keweenaw Bay Indian Community
Ojibwa Recreational Area
Legend
Sand Point Lighthouse
Wetland Trail (~0.35 miles)
Lake Superior Trail (~1.55 miles)
Wetlands
Lake Campground
Pow Wow Campground
Day Use Area
KBIC L'Anse Reservation
Ponds
Ojibwa Recreational Area
Baraga
Anse
KBIC L'Anse Reservation
US 41
41
Hemlock
Cemetery
Camping & Pow Wow Area
Wetland/ Natural Area
Wetland Trail ~0.35 Miles
Lake Superior Trail ~1.55 Miles
Cultural Center
Water
Wetland/ Natural Area
No Camping
Superior
Lighthouse
Marina
ICE
Day-Use Beach & Picnic Area
Wetland/ Natural Area
Camping
KBIC L'Anse Reservation
Lake Superior
Minnesota
Michigan
Wisconsin
Lake Michigan
Lake Huron
Lake Erie
Iowa
Illinois
Indiana
Ohio
Maryland
July 2008
Data Taken From: MGDL, KBNRD
0 0.05 0.1 0.2 0.3 0.4 0.5 Miles